GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:541
ANSWERED ON:02.12.2015
Scientific and Industrial Research Development
Pandey Dr. Mahendra Nath

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) Whether industrial development has been affected in the country owing to slow pace of research and development;
(b) If so, the details thereof and the action taken by the Government in this regard;
(c) the budgetary allocation made by the Government for scientific and industrial research and development under the current plan;
(d) Whether the Government proposes to make adhoc allocation for upgradation of basic research and development programmes; and
(e) if so, the details thereof?

Answer

MINISTER OF STATE FOR SCIENCE AND TECHNOLOGY AND MINISTER OF STATE FOR EARTH SCIENCES

(SHRI Y. S. CHOWDARY)

(a) The pace of industrial development is dependent upon a number of international and domestic factors including the overall global environment as well as the pace of research and development (R&D).

As projected by the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, the rate of industrial growth, measured in terms of Index of Industrial Production (IIP) during the current financial year (April-September, 2015-16) is recorded higher at 4.0 per cent as compared to the growth of 2.9 per cent during the same period of previous year (April-September, 2014-15).

The pace of R&D, measured in terms of national expenditure on R&D as a percentage of Gross Domestic Product (GDP) as depicted in Table 1, is seen to be increasing over the years.

Table 1: National Expenditure on R&D as a Percentage of GDP (RD-G) from 1995-96 to 2011-12

Year	RD-G	Year	RD-G	Year	RD-G
1995-96	0.67	2001-02	0.79	2007-08	0.86
1996-97	0.68	2002-03	0.77	2008-09	0.89
1997-98	0.73	2003-04	0.77	2009-10	0.87
1998-99	0.75	2004-05	0..81	2010-11	0.87
1999-2000	0.78	2005-06	0.88	2011-12	0.88
2000-01	0.81	2006-07	0.87		

Another measure of increase in the pace of R&D is the number of Intellectual Property Rights (IPR) applications. Annexure 1 depicts the status of IPR applications in recent years.

(b) As per the publication titled "Research and Development Statistics (2011-12)" published by the Department of Science and Technology (DST), Ministry of Science & Technology, Government of India in December 2013, total national investment on R&D and the share of public and private sector companies during 2008-09, 2009-10, 2010-11 and 2011-12 is as shown in Table 2.

Table 2: National Investment on R&D

Sector	2008-09	2009-10	2010-11*	2011-12*
Central & State Govt.	28619.40	32721.22	37908.32	43918.22
Higher Education	1911.56	2199.97	2547.43	2949.76
Public Sector Companies	2457.02	2814.56	#3264.84	#3787.15
Private Sector Companies	14365.40	15305.55	18332.88	21965.31
Total National Investment	47353.38	53041.30	62053.47	72620.44
Share of Public Sector Companies	5.19%	5.31%	#5.26%	#5.21%
Share of Private Sector Companies	30.34%	28.86%	29.54%	30.25%

Note: *Estimated #Projected

In comparison, the Government is aware that in the member countries of Organization for Economic Co-operation and Development (OCED) that are noted for strides in industrial development a substantial percentage of the total investment in R&D is made by private sector companies, e.g. 77% in Japan, 68% in Germany, 65% in USA, 45% in UK and 52% in France.

Keeping the above in view, a number of steps have been taken by the Government to enhance industrial growth and increase the share of industries in R&D, significant among them being the following:

o The Make in India programme with 25 thrust sectors which was launched in September 2014 is devised to transform India into a global design and manufacturing hub and includes major new initiatives designed to facilitate investment, foster innovation, protect intellectual property, and build best-in-class manufacturing infrastructure, thus boosting industrial development and R&D.

o The policy and procedures on Foreign Direct Investment has been progressively liberalized.

o For ease of doing business, Government has inter-alia set up an Investor Facilitation Cell, and launched e-biz Mission Mode Project providing 29 Government to Business (G2B) services.

o On creating world class infrastructure, Delhi Mumbai Industrial Corridor (DMIC) project is under implementation and many other initiatives including Amritsar-Kolkata Industrial Corridor, Chennai-Bengaluru Industrial Corridor, Bengaluru-Mumbai Economic Corridor and the Vizag-Chennai Industrial Corridor have been conceptualized.

o The industry sector has been urged to increase their share to 50% in the national R&D expenditure.

o The Government has targeted to raise the national R&D expenditure to 2% of GDP by the end of 12th five year plan.

o The guidelines on R&D for Central Public Sector Enterprises (CPSEs) issued by the Department of Public Enterprises prescribe that Maharatna & Navratna CPSEs and Miniratna − I & II & other CPSEs incur a minimum R&D expenditure of 1% and 0.5% of Profit After Tax (PAT), respectively.

o The Council of Scientific & Industrial Research (CSIR) through its constituent laboratories provides technology, product and knowledge-based services to the industry covering a wide spectrum of science and technology.

o There are various funding schemes under several Government ministries/ departments including the Ministry of Science & Technology, that support industry in undertaking technology development, upgradation and commercialization activities.
o The Government provides a number of fiscal incentives to the industrial sector to increase their investment in R&D, as listed in Annexure 2.

o The 'Start up India, Stand-up India' campaign was announced by the honourable Prime Minister on 15th August, 2015 seeking to provide an impetus to the entrepreneurial landscape of India.

o The Atal Innovation Mission (AIM) is being set up under National Institution for Transforming India (NITI Aayog). AIM will be an Innovation Promotion Platform involving academics, entrepreneurs, and researchers drawing upon national and international experiences to foster a culture of innovation, R&D in India.

o A mechanism called Self Employment and Talent Utilization (SETU) has been established under NITI Aayog. SETU will be a Techno-Financial, Incubation and Facilitation Programme to support all aspects of start-up businesses, and other self-employment activities, particularly in technology-driven areas.

o An India Aspiration Fund (IAF) managed by Small Industries Development Bank of India (SIDBI), which is India's Principal Financial Institution, has been established for the promotion, financing and development of the Micro, Small and Medium Enterprises (MSME) sector.

o SIDBI also launched the Make in India Loan for Small Enterprises (SMILE) Scheme. SMILE will offer quasi-equity and term based short term loans to Indian SMEs which will have less stringent rules and regulations.

o Micro Units Development and Refinance Agency (MUDRA) Bank will be responsible for regulating and refinancing all Micro-finance Institutions (MFI) which are in the business of lending to micro/small business entities engaged in manufacturing, trading and services activities.

(c) Table 3 lists the budgetary allocation made by the Government to the Department of Scientific & Industrial Research (DSIR) for scientific and industrial research and development.

Table 3: Budgetary Allocation for DSIR in Rs crore

Year	2012-13		2013-14		2014-15		2015-16	
	Plan	Non-Plan	Plan	Non-Plan	Plan	Non-Plan	Plan	Non-Plan
BE	2013.00	1471.00	2013.00	1558.00	2100.00	1607.15	2281.00	1750.00
RE	1555.00	1401.00	1620.00	1558.00	1600.00	1800.00	2192.50	1644.20
AE	1544.84	1400.82	1602.82	1556.72	1594.15	1799.37		

(d)&(e) There are no indications that the Government proposes to make adhoc allocation for upgradation of basic research and development programmes.

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